SIN 289

Issue 2.8
February 2026

Suppliers' Information Note

For The BT Network

BT MegaStream® 155 & BT MegaStream® Aggregate

Service Description

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1. Introduction

This Suppliers' Information Note (SIN) describes the BT MegaStream®155 and MegaStream®Aggregate services and provides technical information for terminal equipment (TE) manufacturers and suppliers. It should be read in conjunction with SIN 333[1], SDH Customer Interfaces at the STM-N level (where N=1,4,16).

Note: The MegaStream 155 service and any associated variants and product features including MegaStream Aggregate were withdrawn from new supply in November 2021. All MegaStream products were withdrawn from service completely at the end of November 2025. Reasonable endeavours maintenance support will continue to be provided on existing installations contracted under Private Circuits Overrun Service (PCOS) terms and conditions, and where technically possible and commercially realistic to do so until circuits are either ceased or withdrawn from the PCOS service limited extension completely at the end of July 2026.

2. Service Outline

BT MegaStream®155 is an inland Synchronous Digital Hierarchy (SDH) point to point or aggregate (MegaStream®Aggregate), leased high speed digital service supporting customer access at 155 520 kbit/s which conforms to ITU-T Recommendation G.707[2].

2.1 MegaStream® 155

The service will support the SDH Virtual Container VC4. The use of the VC4 will depend on customer application, however, if the customer wishes to sub-divide the VC4 into VC12s, VC3s, or ATM etc, then BT recommends that the multiplexing structure in figure 1 of ETS 300 147[3] is adopted. The service is available to the customer via the following interfaces:

- CCITT Recommendation G.703[4] Section 12 (STM-1 electrical)
- ITU-T Recommendation G.957[5] (STM-1 optical)

NOTE: The VC4 for end-to-end usage will be formed out of a payload container of size 149,760 kbit/s and a path overhead of 576 kbit/s.

2.2 MegaStream® Aggregate

The MegaStream®Aggregate service allows for multiple numbers of inland MegaStream®2048Kbit/s circuits or a combination of MegaStream®2048Kbit/s, 34,368Kbit/s and 45,736Kbit/s, or KiloStream Aggregate Interface Bearer, International Private Circuits, ISDN 30 or any other 2Mbit/s presentation as per the multiplexing structure in figure 1 of ETS 300 147[3] possibly from all over the United Kingdom to be delivered to a site as a single 155,520Kbit/s customer presentation.

The service will support a maximum of 63 Customer useable individual 2048Kbit/s channels per Aggregate Interface.

Channel assignment within the STM-1 delivery will be by prior agreement with BT.

The service will support both Aggregate to Single 2048Kbit/s working and Aggregate to Aggregate working.

3. Service Availability

The MegaStream®155 service has been available since November 1997 where network capacity exists.

The MegaStream®Aggregate service has been available since early 1999 throughout the UK (inland only) where network capacity exists.

Note: The MegaStream 155 service and any associated variants and product features including MegaStream Aggregate were withdrawn from new supply in November 2021. All MegaStream products were withdrawn from service completely at the end of November 2025. Reasonable endeavours maintenance support will continue to be provided on existing installations contracted under Private Circuits Overrun Service (PCOS) terms and conditions, and where technically possible and commercially realistic to do so until circuits are either ceased or withdrawn from the PCOS service limited extension completely at the end of July 2026.

4. Technical Specification

The technical presentation is described in SIN 333[1], SDH Customer Interfaces at the STM-N level (where N=1,4,16).

4.1 Service Presentation

The services are presented as an optical Single-Mode fibre connection conforming to ITU-T Recommendation G.957[5] for SDH optical requirements. The optical fibre presentation at the UNI is conformant to BS EN 60825-1 [6] and BS EN 60825-2 [7] as a Class 1 Laser Product.

The physical presentation is via an FC type optical connector conforming to BS EN 186110:1994 [8]. The connector is Physical Contact (PC) polished. Non Return to Zero (NRZ) line coding is used as specified in ITU-T Recommendation G.957[5].

The signal transmitted from the BT NTE is derived from a 1310nm wavelength long haul SDH class (L-1.1 as specified in ITU-T Recommendation G.957[5]) optical transmitter which has been attenuated by 10dB to provide a transmitted power range of between -10dBm and -15dBm. (The 10dB attenuator is provided by BT on the NTE transmitter to ensure that the Customers CPE receiver is not saturated). The NTE receiver power range is between -10dBm and -34dBm.

The recommended configuration of the SDH Section and Path Overheads is given SIN 333[1]. Figure 1 below highlights the difference between SDH Sections and SDH Paths.

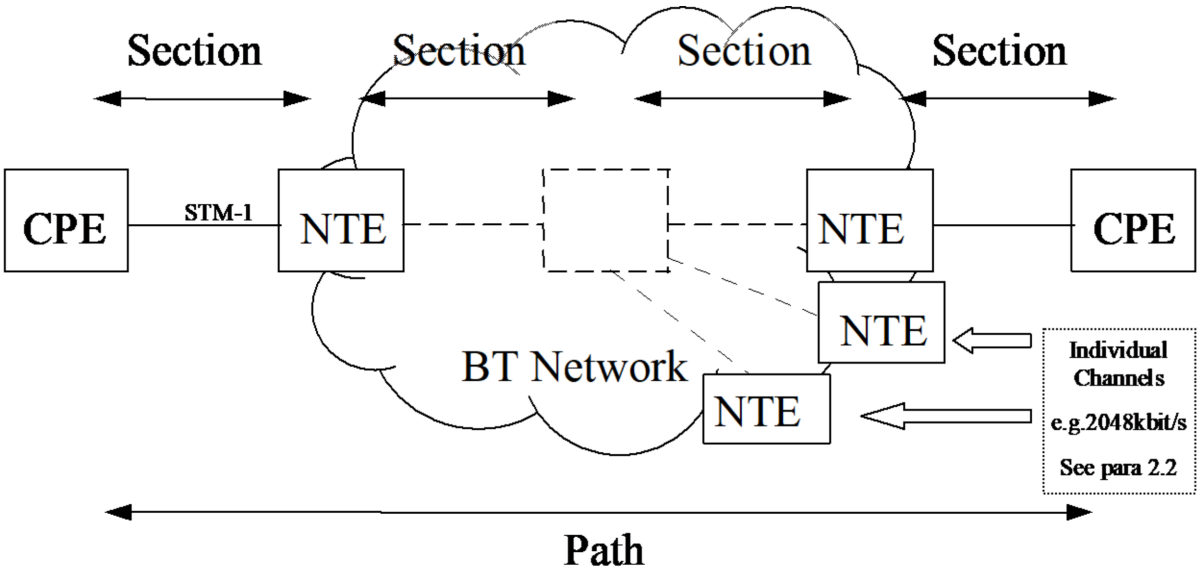

Figure 1 - Comparison of SDH Path vs. Section

4.2 Connection Characteristics

Connection characteristics are described in SIN 333[1], SDH Customer Interfaces At the STM-N level (where N=1,4,16).

4.3 Multiplex section protection (MSP)

Multiplex section protection (MSP) will provide a standby connection within the customer's premises. This connection may be electrical or optical. See SIN333[1] for technical details.

5. Further Information Contact Point

For "sales and marketing" information about this service please contact either:

- Your Company's BT account manager.
- For business customers, BT sales on 0800 800152 for product and service information, sales and rental enquiries.

If you have enquiries relating to this document then please contact us at: sinet.helpdesk@bt.com

6. References

BT Suppliers' Information Note:

[1]	SIN 333	SDH Customer Interfaces at the STM-N level (where N=1,4,16).	Latest Issue

ITU-T / CCITT Recommendation:

[2]	G.707	Network node interface for the Synchronous Digital Hierarchy (SDH).	1996
[4]	G.703	Physical/Electrical characteristics of hierarchical digital interfaces.	1991
[5]	G.957	Optical interfaces for equipments and systems relating to the synchronous digital hierarchy.	1995

ETSI Standards:

[3]	ETS 300 147	Transmission and Multiplexing (TM); Synchronous Digital Hierarchy (SDH); Multiplexing Structure.	1997

British Standards:

[6]	BS EN 60825-1	Safety of Laser Products Part 1 Equipment classification.	1994
[7]	BS EN 60825-2	Safety of Laser Products Part 2 Safety of Optical fibre communications systems.	1995
[8]	BS EN 186110	Sectional Specification. Connector sets for optical fibre and cables Type FC.	1994

7. Abbreviations

CCITT	Now known as ITU-T
ETS	European Telecommunication Standard
ETSI	European Telecommunications Standards Institute
ITU-T	International Telecommunication Union For Telecommunications (formerly CCITT)
NTE	Network Terminating Equipment
MSP	Multiplex Section Protection
SDH	Synchronous Digital Hierarchy
SIN	Suppliers' Information Note
TE	Terminal Equipment
UNI	User Network Interface
VC	Virtual Container

8. History

Issue 1.0	Nov 1997	First Issued.
Issue 2.0	Feb 1999	Includes Aggregate Service.
Issue 2.1	Nov 1999	Updated to include references to MSP and SIN 333.
Issue 2.2	Apr 2001	Editorial changes.
Issue 2.3	May 2003	Approval Requirements statement removed, information available via SINet Useful Contacts page. Reference numbering amended.
Issue 2.4	February 2016	Change SINet site references from http://www.sinet.bt.com to http://www.btplc.com/sinet/
Issue 2.5	July 2020	Notification of service withdrawal timeframes added. Change SINet site references from http://www.btplc.com/sinet/ to https://www.bt.com/about/sinet
Issue 2.6	July 2021	Stop Sell New dates updated
Issue 2.7	September 2022	Confirmation of full service withdrawal date.
Issue 2.8	February 2026	Minor editorial changes as MegaStream has a limited extension until end of July 2026

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